University of Pennsylvania Working Papers in Linguistics

Volume 23
Issue 2 *Selected Papers from New Ways of Analyzing Variation (NWAV 45)*

Article 2

11-1-2017

Twentieth Century Sound Change in Washington DC African American English

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Abstract
This paper presents a new perspective on African American English (AAE) in Washington DC (DC) by looking at sound change internal to the DC African American community over time. DC has had a stable African American population since the early twentieth century, and since 1960 African Americans have been the ethnic majority. We analyze changes in the vocalic system and how they relate to larger population demographics in DC. This study looks at several vowel categories for 29 speakers from the Corpus of Regional African American Language (CORAAL), using interviews recorded in 1968 and 2015/2016 (Kendall and Farrington 2017). With speakers born between 1907 and 1998, we provide insight into the older regional patterns of DC AAE as well as participation in the widespread African American Vowel System (Thomas 2007). Results demonstrate patterns of stability and change resulting from competing norms of these two systems, including the loss of older regional features, regular monotonic sound change, and curvilinear patterns of change. This complex pattern of development suggests that the AAE speaking community in DC is undergoing changes that aren't simply movements towards an external norm like a monolithic AAVS, but rather represent the ongoing development of a regionally-based ethnolect.

Twentieth Century Sound Change in Washington DC African American English

Shelby Arnson and Charlie Farrington*

1 Introduction

It is now well recognized that African American English (AAE) is not a homogenous language variety as it was once viewed by sociolinguists (Wolfram 2007), especially with regard to phonological features like vowels (Wolfram and Kohn 2015; Yaeger-Dror and Thomas 2009). Recent studies of vocalic variation among African Americans in different regional and social context have illustrated patterns of accommodation and divergence to local European American patterns (Wolfram and Thomas 2002; Yaeger-Dror and Thomas 2009). In Wolfram and Thomas's (2002) study of Hyde County AAE in Eastern North Carolina, the authors suggest changing and competing norms for older and younger African Americans, especially for salient regional vocalic features. Sound change within African American speech communicates can result from multiple channels, including changes internal to the ethnic community (Blake and Shousterman 2010; Fought 2013) or the co-creation of sound changes in comparison to European Americans in the same region (King 2016; Wolfram and Thomas 2002). The current work addresses the diachronic development of the vocalic system in Washington, DC (DC) internal to the African American community over the course of the twentieth century.

Data come from the Corpus of Regional African American Language (CORAAL) (Kendall and Farrington 2017).[1] This unique soon-to-be public corpus of AAE and accompanying website will host transcribed and time aligned data from a variety of regional and social contexts (e.g., DC, Rural and Urban North Carolina, Atlanta, Southern Georgia, etc.). In this short paper, we take an initial look at the corpus, by focusing on the diachronic sound patterns of a subset of speakers from two sub-corpora from DC, with speakers born between 1907 and 1998. Like Wolfram and Thomas (2002), we find changing norms, with vocalic patterns of an older, more broadly regional system competing with the African American Vowel System (AAVS), a more widespread AAE vowel pattern linked to the Great Migration (Thomas 2001).

DC is particularly interesting for a study of sound change in AAE because it has had a large stable African American population since well before the turn of the twentieth century, composing about 30% of the city's total population between 1800 and 1940 (U.S. Census Bureau). As a result of different waves of the Great Migration (Price 1969), when African Americans from the Southeast migrated north, DC's African American population rose dramatically beginning in 1940 to reach a peak of 70% of the city's population by 1970 (U.S. Census Bureau). This majority population has maintained in the Greater DC area over the last 50 years, though it is now closer to 50%. This recent decline in the population is largely a result of residents moving into surrounding areas like Prince George's County in Maryland. The relationship between these larger demographic patterns and the language of local African Americans has largely been underexplored.

DC has had an especially rich history in the study of African American language and culture. In addition to Fasold's (1972) landmark sociolinguistic analysis, previous work includes the "Yellow House" studies (Loman 1967) and Putnam and O'Hern's (1955) sociological/phonetic study of a DC alley, which was an early precursor to the sociolinguistic (and sociophonetic) study of AAE. Despite the historical importance of DC AAE on sociolinguistics and linguistic theory, AAE vowels in DC have received little attention until Georgetown University's recent Language and Communication in the Washington D.C. Metropolitan Area (LCDC) Project. This project was born out of a lack of general research on language and culture in DC. This work has been sociophonetic in nature, and often compared vowel processes between the African American and local European American communities (Callier et al. 2009; Lee 2016; Nylund 2013; Podesva 2011).

*Support for the research was funded by NSF grant BCS-135872. We would like to thank Tyler Kendall, Ralph Fasold, Minnie Quartey, Charlotte Vaughn, Erik Thomas, Mary Kohn, and the audience at NWAV 45.

[1]CORAAL will be available publically in late 2017. For information regarding the status of CORAAL, visit blogs.uoregon.edu/lvclab/.

Some work has also looked at consonantal features of AAE across intra-ethnic social classes (Grieser 2014).

As mentioned, DC has had a stable population of African Americans, dating to the nineteenth century, and, as a result of the Great Migration, maintained an ethnic majority in DC for much of the twentieth century. With CORAAL speakers born between 1907 and 1998, we are able to analyze how the linguistic system changed as a result of the Great Migration population changes. Our earliest speakers typify the older Mid-Atlantic regional norm, which was likely shared by both European Americans and African Americans, similar to the situation in eastern North Carolina described by Wolfram and Thomas (2002). In this paper, we first look at the AAVS and historical evidence of regional patterns in the Mid-Atlantic region, which represents the older DC vowel patterns. Within our data, we take a qualitative look at four generations of speakers from CORAAL. Lastly, we focus in on four vowel classes showing different patterns, including the loss of older regional features, a new change in progress, and a complex pattern that shows the vowel system isn't just undergoing movements towards an external norm like a monolithic AAVS, but rather represent the ongoing development of a regionally based ethnolect.

2 Washington DC and African American English Vowels

In this section, we will begin by focusing on a handful of vowel features that have been noted in the literature as the Mid-Atlantic regional norm, which would have been the vowel system in DC in the early twentieth century. After that, we'll turn our attention to the AAVS, a distinctive AAE vowel system that has been documented in a number of regional settings, the spread of which appears to correspond to waves of the Great Migration.

A regional feature common to the Virginia Tidewater and Piedmont regions in the early twentieth century was *Virginia Raising*, the process of raising the nucleus of BOUT (pre-voiceless /au/) (Thomas 2001).[2] BOUT raising can also exhibit a higher and more fronted offglide. This feature was common to both African Americans and European Americans in the region (Dorrill 1986, Thomas 2001). Additionally, Putnam and O'Hern (1955) noted the fronting of the nucleus of BOUD (pre-voiced /au/), which has been noted as a feature of older Coastal North Carolina AAE (Thomas 2001; Wolfram and Thomas 2002).

Another earlier feature common to the Coastal Mid-Atlantic region was the fronting of the high and mid back vowels, BOOT and BOAT (Dorrill 1986; Wolfram and Thomas 2002). While the fronting of both classes is widespread in Southern European American English varieties for much of the twentieth century (Thomas 2001), in many varieties of AAE, the classes are not fronted (Thomas 2007). In the DC/Baltimore area, BOOT and BOAT are historically fronted (Dorrill 1986; Schnitzer 1972).

When the population of DC started growing during the Great Migration, the influence of Southern AAE speakers presumably introduced new linguistic norms which competed with the previous local forms. In many locations, this corresponds to the introduction of the widespread AAVS patterns. The adoption of vowel patterns in the AAVS has been found in many non-Southern locations including Brooklyn, NY (Thomas 2007), Columbus, OH (Durian, Dodsworth and Schumacher 2009), and Milwaukee, WI (Purnell 2009). The presence of this system in DC has yet to be investigated. Thomas (2001:165) notes that the "uniformity is undoubtedly linked to the relative recentness of the 'Great Migration' of African Americans out of the South to Northern and Western cities." Figure 1 displays a schematic of the AAVS.

In general, the AAVS bears some resemblance to the Southern Vowel Shift (SVS) (Fridland 2003; Kohn 2014; Thomas 2007). The front lax vowels BIT, BET and BAT are raised (Thomas 2007), but unlike the SVS, they remain monophthongal. There is some evidence for the front tense vowels retracting, especially for BAIT (Fridland 2003), but this is rare outside of the Deep South. The high and mid back vowels, BOOT, BOOK and BOAT resist fronting, and the low back vowels resist merging. In fact, Koops and Niedzielski (2009) show evidence for BOT fronting in Houston AAE. Other features, not included on this schematic, but are common through AAE speaking

[2]We follow Yaeger-Dror and Thomas (2010) in using Wellsian-style B_T frame to represent vowel classes. Actual contexts vary by speaker.

communities, are BIDE glide weakening and the PIN/PEN merger (Thomas 2007; Thomas and Bailey 2015). Additionally, another feature which has been found in urban AAE is pre-/r/ centralization, which has been found in St. Louis (Blake and Shousterman 2010), Memphis (Weaver 2000), and DC (Luelsdorff 1975), also called the *urr* variable by Blake and Shousterman (2010).

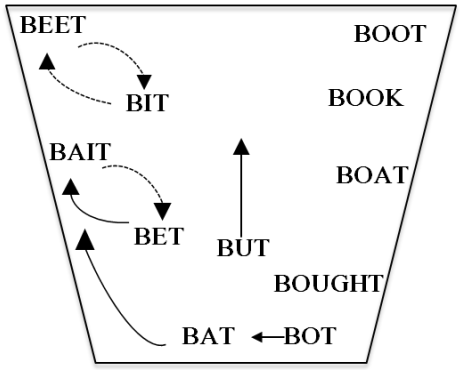

Figure 1: The African American Vowel System (figure adapted from Kohn 2014).

Several intra-community studies provide some evidence that AAE linguistic variables are more common in the speech of African Americans in primarily African American schools (Deser 1990; Kohn 2014), neighborhoods (Purnell 2009), or with primarily African American social networks (Fridland 2003; Wolfram 1969). Considering together the ethnic stratification of DC and this notion of a positive correlation between community demographics and the distribution of the AAVS, we might expect to find a concentration of these patterns among speakers in DC, especially after the Great Migration related population changes.

With the notion of competing norms, we ask how the linguistic systems reflect the changing population of DC, which resulted in a majority populated African American city. How do the older features of the region fare when speakers come in not using those features (e.g., Virginia Raising), or when the widespread Southern features are in direct contrast to the local norm (e.g., BOOT/BOAT fronting and non-fronting)? And finally, do we see evidence that other changes in progress are happening reflecting local norms despite a widespread vowel system.

3 Methods

3.1 Data

As mentioned in the introduction, the data come from CORAAL (Kendall and Farrington 2017). This first analysis of CORAAL sub-corpora presents an exciting new opportunity to look at change over time in DC. The two sub-corpora we focus on here are DCA (Kendall, Fasold et al. 2017), which contains archival sociolinguistic recordings from Fasold's (1972) analysis, recorded between 1968 and 1969, and DCB (Kendall, Quartey et al. 2017), which contains modern sociolinguistic interviews from 2015-2017. The data used in the present study consist of a subset of 29 participants from these two sub-corpora, with speakers born between 1907 and 2000. All speakers were either born and raised in DC or lived the majority of their lives there. Speakers were roughly balanced between the two sub-corpora, selected to be stratified by sex, age (four generations) and social class (group 1, working class; and group 2, middle class). We won't focus on social class differences in the current analysis, but CORAAL presents us with a unique avenue for future work involving social class differences in AAE. Interviews in the 1968 data lasted between 20 and 60 minutes, consisting of a sociolinguistic interview as well as elicitation tasks. The 2016 data consist of sociolinguistic interviews as well as a reading passage and a word list, averaging 45-60 minutes each. This modern dataset allows for both a real-time comparison, as well as an apparent-time comparison.

			Group 1		Group 2		
Generation	YOB	Sub Corpus	M	F	M	F	Totals
1	1907-1939	DCA	3	2	2	2	9
2	1940-1956[3]	DCA	2	2	1	2	7
3	1954-1978	DCB	1	1	2	2	6
4	1988-1998	DCB	2	2	2	1	7

Table 1. Speaker demographics (Numbers in cells represent the number of speakers examined).

3.2 Vowel Analysis

For each speaker, five to ten vowels were measured from the following vowel classes: BEET, BIT, BET, BAIT, BAT, BAN, BOT, BOUGHT, BUT, BOAR, BOWL, BITE, BIDE, BOAT, BOOT (/u/ following non-coronals), TOOT (post-coronal /u/), BOY, BOOK, POOL (pre-lateral /u/), BOUD (/au/ before a voiced obstruent or open syllable), BOUT (/au/ before a voiceless obstruent), BIRD, MARY, MARRY, MERRY, PIN, and PEN. Between 125-200 tokens were extracted for each speaker, and only tokens with a duration greater than 70 milliseconds were selected for analysis to avoid effects of undershoot (Thomas 2011). Additionally, no more than three tokens of a single lexical item were selected, unless noted.

Tokens were drawn from interview speech, occasionally selecting tokens from word lists or reading passages when a speaker did not meet the minimum token count for a given vowel. All vowels were hand selected and extracted by hand using a Praat script that extracted the pitch, first formant, second formant, and third formant for five equidistant time points throughout the vowel's duration. Outliers were visually checked, manually corrected, or removed if there was evidence of tracking issues. All vowel data in the following analyses were manipulated and Lobanov normalized (Lobanov 1971) using the Vowels package (Kendall and Thomas 2010) for R. For plotting and analysis, monophthongal vowels are plotted using the midpoint of the vowel (50%) and diphthongs are plotted using the 25% and 75% points to represent the vowel nucleus and glide.

4 Results

We begin our results by presenting four vowel plots representing each of the four generations listed in Table 1. This initial qualitative look at the data will ground us in how the regional vowel system of the early twentieth century developed and responded to the demographic changes in DC. After that, we will focus on four vowel classes which exhibit three patterns of change and alignment. The first is the loss of the older regional pattern, exemplified by BOUT and BOOT; a possible sound change in progress with BOUGHT raising; and finally, a complex pattern, curvilinear change with BOAT F2.

4.1 Generational Vowel Patterns

Figures two through five show the mean vowel plots for CORAAL DC speakers in each of the four generations. For each generation, Lobanov normalized vowel means are plotted. Vowels with glides are shown with arrows representing offglide targets. Additionally, ellipses representing one standard deviation from the mean of the vowel nucleus are included for vowels of interest.

Figure 2 represents Generation 1, speakers from DCA born between 1907 and 1939. Being our oldest generation, we expect these speakers to exhibit patterns most like the older regional vowel system, i.e., the older, local DC norm. It should be noted that while these speakers were born in DC, the first wave of the Great Migration can be traced back to 1915 (Price 1969), so even these oldest speakers were presumably in interaction with other non-local vowel systems. Despite this, we see fairly fronted high and mid back vowels. For example, compare the position of TOOT/BOOT to the pre-liquid POOL, and BOAT compared to BOAR. The BOUD nucleus is

[3]While there are a few speakers who overlap in birth year between Generations 2 and 3, these speakers were recorded nearly fifty years apart, and are kept separate because of this.

fronted with a back gliding offglide. The BOUT nucleus is raised (compare to the position of BOT) and upgliding, the Virginia raised position. The low back vowels are separate, this is a trend that we will see over the next few plots as well. And finally, BAIT and BET are non-overlapping.

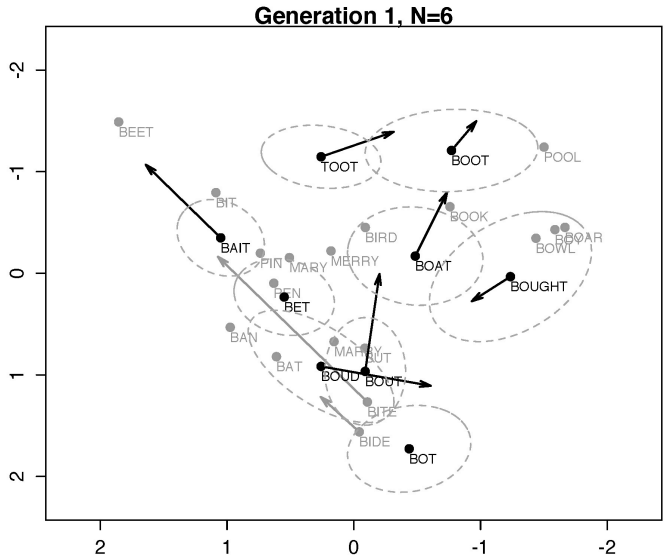

Figure 2. Generation 1, Speakers born between 1907-1939.

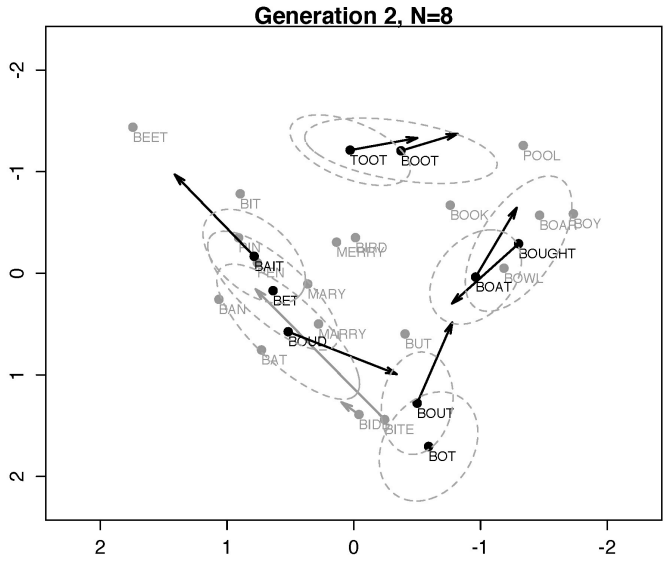

Figure 3. Generation 2, Speakers born between 1940-1956.

Figure 3 represents Generation 2, with speakers born between 1940 and 1956, who were recorded as young speakers in 1968. These younger speakers, at the time of recording in 1968, had lived the majority of their lives with a majority African American population. The initial wave of the Great Migration had ended in 1930, but the much larger second wave between 1940 and 1960 was happening during their childhoods. It is in this generation of speakers where we start to see reflexes of the AAVS (Figure 1). For example, BAIT and BET nuclei are now overlapping for these speakers. BOAT is retracting. In contrast to the AAVS feature, the regional BOOT and TOOT are still fronted. The BOUT nucleus has lowered relative to Generation 1. BOUD has an extremely raised and fronted nucleus, overlapping with BAT. Additionally, the nucleus of BOUGHT is now higher than BOAT, this evidence for raising is not expected in either the regional system or the AAVS

pattern. Also note that the MERRY vowel class is centralized with BIRD, while MARY and MARRY remain distinct.

Generation 3, represented in Figure 4, includes speakers born between 1954 and 1978, and recorded as adults in 2015-2016. The majority of these speakers' lives were spent in DC post-Great Migration, which gave the dialect a chance to concretize. As such, we might expect more influence of the AAVS-like system resulting from this more stable population. Similar to Generation 2, we see overlapping BAIT/BET nuclei, a retracted BOAT, and a BOOT class which is now retracted toward the POOL class, though the ellipsis for BOOT is wide, showing there is a large amount of variation. The BOUD nucleus is lowered, in contrast to Generation 2, and BOUT overlaps with BOT. BOUGHT has remained in a similar position to Generation 2, and the pre-/r/ front vowels exhibit the same pattern as Generation 2.

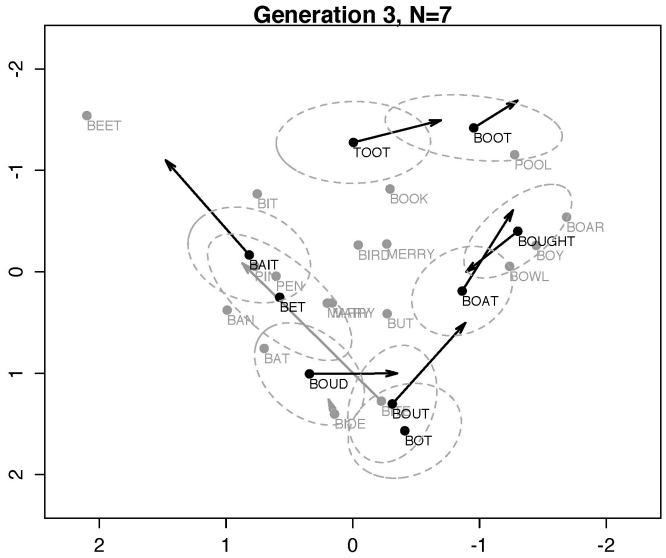

Figure 4. Generation 3, Speakers born between 1954 and 1978.

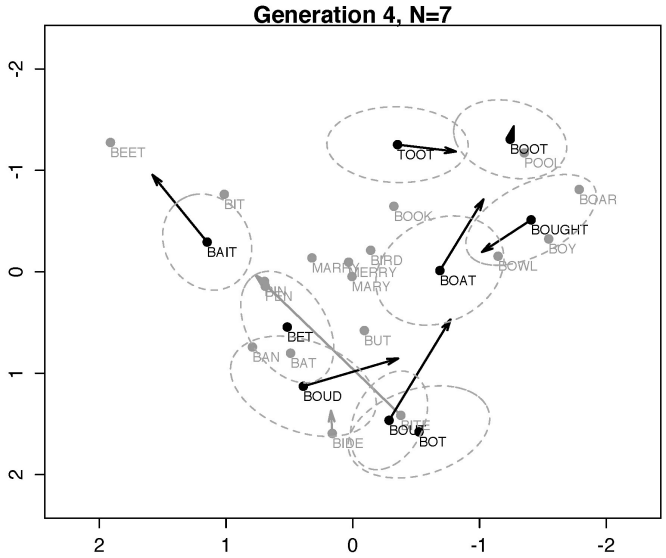

Figure 5. Generation 4, Speakers born between 1988 and 1998.

And finally, Figure 5 presents Generation 4, with speakers born between 1988 and 1998, who were recorded in 2015-2016. Like Generation 3, these speakers have grown up with a more stable population in DC. As with other regional studies of AAE, especially in urban areas, we might ex-

pect the strongest AAVS system (as opposed to the more strongly regional system of Generation 1). In line with this, we see a more AAVS-like non-fronted BOOT, which is now completely overlapping with POOL. BOUD is still fronted, but more similar in glide trajectory to BOUT than previous generations. Interestingly, we see a reversal of the AAVS pattern in BAIT and BET, with non-overlapping nuclei, as well as BOAT, which is now fronting. BOAT fronting is surprising because BOAT typically does not front before BOOT (Baranowski 2014). Between Generations 3 and 4, BOUGHT doesn't appear to have raised. Lastly, we see that urr centralization is now fully established, with MARY, MARRY, MERRY overlapping with the BIRD vowel class. While we see some evidence that the AAVS has advanced through DC AAE, like with BOOT, other features actually show reversals of the previous two generations' AAVS patterns (e.g., BAIT/BET, BOAT).

To summarize, looking across these generational groups we see, simultaneously, stability in some features, rapid loss over time in others, like Virginia Raising, and what appears to be curvilinear trajectories of change, like the fluctuation of BAIT and BET position, as well as the fronting and retraction of the high and mid back vowels. We also see slow introduction of *urr* centralization in DC in real time, first cited in DC in the 1970s (Luelsdorff 1975:28).

4.2 Diachronic Vowel Patterns

While we see different patterns of stability and change in the generational plots in Section 4.1, we now focus on three broader patterns and how individual speakers are changing over time. The first pattern we address is the loss of earlier regional features. These involve vowels that represent some aspect of the older norm, and over time are leveled toward the AAVS pattern, exemplified by BOUT and BOOT. The second pattern, exemplified by BOUGHT raising, is an unexpected change in progress that we don't have evidence for in the AAVS, nor do we see it in the older regional norm, which means it could represent a new regional/ethnolectal feature in the variety. And finally, we'll focus on a vowel that exhibits a pattern of reversal over the four generations, BOAT retraction and fronting. Over the next few figures, we will present mean formant values by year of birth. For reference the speaker's generation is shown by the shape of the point, and the Loess line shows trends over the data.

4.2.1 The Loss of Regional Features

The first pattern we see is the loss of older regional patterns. Similar to Wolfram and Thomas (2002), who discuss competing norms in Eastern North Carolina AAE, we see changes over time that are likely the result of population change. We begin with the BOUT vowel class, which, in our generation plots, lowers between the first two generations, but then appears to remain stable. If we focus on how individual speakers change over time, we see this pattern holding. Figure 6 (left) illustrates the Lobanov normalized F1 value at the nucleus, which shows vowel height, plotted by year of birth. Speakers with the highest BOUT nuclei are primarily from Generation 1.

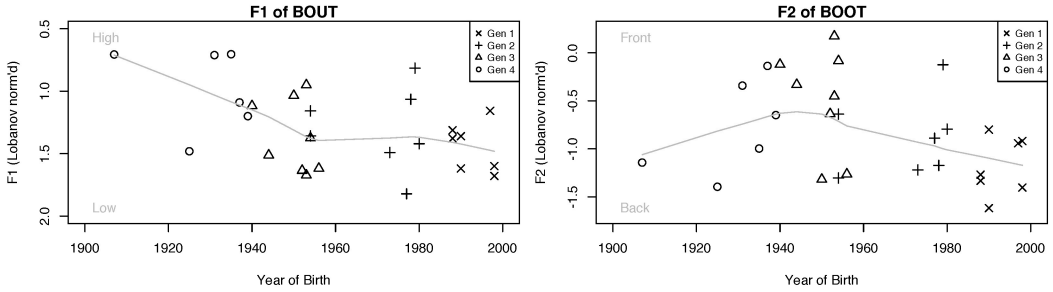

Figure 6. BOUT F1 (left) and BOOT F2 (right) by year of birth.

In Figure 6 (right) shows the F2 of BOOT over time. While a retracted BOOT is common throughout the data over time, the trend is retraction over time, with nearly all speakers born after 1960 exhibit non-fronted BOOT. This change, reflecting the change from the older norm to the AAVS non-fronted BOOT, is widespread throughout the AAE speaking community.

While these two vowel classes might have been widespread features of the Virginia Tidewater

and Piedmont regions (Thomas 2001), they don't appear to have been maintained after the initial population movements brought about in the Great Migration. While non-fronted BOOT is a salient vowel for the AAVS (Thomas 2007; Kohn 2014), BOUT does not have an AAVS counterpart, here it levels to a more mainstream position.

4.2.2 Incoming Changes in Progress

Figure 7 shows F1 of BOUGHT, by year of birth. BOUGHT shows monotonic change, with the nucleus incrementally raising over the twentieth century. F1 of BOUGHT shows a more variable position for speakers before 1960, but remains high for speakers born after 1960. While the resistance to the BOT/BOUGHT merger is a feature of the AAVS, Southern varieties of AAE aren't found to raise the nucleus. BOUGHT nucleus raising has been documented in the speech of African Americans in New York City (Coggshall and Becker 2009), and Becker (2014) finds that African Americans are maintaining this New York City English dialectal feature while European Americans are beginning to move away from it. One hypothesis is that a raised BOUGHT could be becoming a feature of northern AAE, and then DC is orienting towards this new northern norm, but more regional locations would be needed to confirm this.

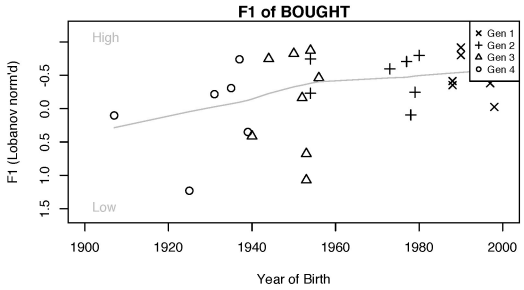

Figure 7. BOUGHT F1 by year of birth.

4.2.3 Complex Patterns of Change

The next pattern that we want to touch briefly on is what appears to be a curvilinear one, showing us that sound changes in DC AAE are not simply moving monotonically from an older norm to a monolithic AAVS. Figure 8 shows the F2 of BOAT by year of birth. While we might expect BOAT to exhibit similar patterns to BOOT, we do see some differences. Our oldest speakers show moderate fronting of the BOAT class, which is the old regional pattern (Wolfram and Thomas 2002; Dorrill 1986). In the middle two generations, when we expect the AAVS to be taking hold, BOAT retracts. In the youngest speakers, born after 1978, we see quite a bit of variability, but the trend is that speakers are now more fronted, and we can see that in Figure 5 above.

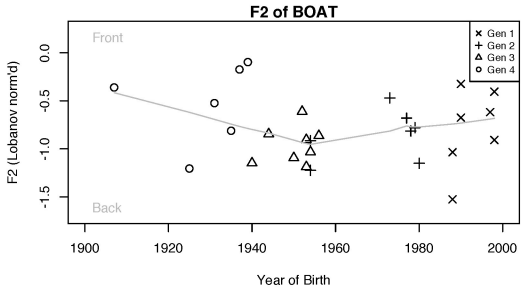

Figure 8. BOAT F2 by year of birth.

To summarize, for the vowels under analysis, we see broader patterns like stability, monotonic change and curvilinear change over time. But the specific kinds of changes are related to the social context of DC in the twentieth century. Some changes reflect the rapid loss of a regional feature, or a slower change in progress, while other changes are not clearly monotonic, as we see with BOAT, which relate to competing norms of the linguistic systems in DC.

5 Conclusion

AAE in Washington DC underwent differential patterns of change over time resulting from competing norms. For example, while we see the loss of regional features like raised BOUT and fronted BOOT, newer changes over time become embedded in the community, like raised BOUGHT. An old feature, like fronted BOAT, which was retracted for Generations 2 and 3, is once again fronted for some younger speakers. Additionally, we find that pre-/r/ centralization is most evident in the youngest speakers, though has been around since the early 1970s in DC (Luelsdorff 1975).

Over the course of the twentieth century, DC's African American population underwent a large population shift, from a stable minority to a massive majority, with many new residents coming from the Carolinas and Virginia. This change corresponded to the spread of some AAVS-like features. With the youngest generation in our data, though, we see speakers beginning to shift away from some AAVS forms, while embracing others. In terms of dialect formation, this youngest generation is the most stable, and the newest features (e.g., BOUGHT raising, pre-/r/ centralization) are the ones that will come to represent DC AAE.

There is limited research on the social correlates of the AAVS (for other features, see, Kendall and Wolfram 2009; Nguyen 2006; Wolfram 1969) and divergence from the widespread AAVS pattern could have social meaning related to solidarity with DC for the youngest generation, alongside the emergence of regional features (Wolfram and Thomas 2002). While this paper represents the first step in analyzing vowels in DC in CORAAL, we plan to expand our analysis to the full corpus, at which time we will be able to start to disentangle differences in sex and social class, which are expected to provide even more clues to how the competing norms in DC's African American community played out in real time.

References

Baranowski, Maciej. 2014. The Sociolinguistics of Back Vowel Fronting in Manchester English. Paper presented at Methods in Dialectology 15, Groningen, Netherlands.

Becker, Kara. 2014. Linguistic repertoire and ethnic identity in New York City. *Language & Communication* 35:43–54.

Blake, Renée, and Cara Shousterman. 2010. Diachrony and AAE: St. Louis, hip-hop, and sound change outside of the mainstream. *Journal of English Linguistics* 38:230–247.

Callier, Patrick, Jermay Jamsu, and Jinsok Lee. 2009. A Diachronic Study of /ay/ Monophthongization in Washington, DC. Paper presented at NWAV 38, Ottawa, October.

Coggshall, Elizabeth, and Kara Becker. 2009. The vowel phonologies of African American and white New York City residents. *Publication of the American Dialect Society* 94:101–128.

Deser, Toni. 1990. Dialect transmission and variation: An acoustic analysis of vowels in six urban Detroit families. Doctoral dissertation, Boston University.

Dorrill, George T. 1986. Black and white speech in the South: Evidence from the Linguistic Atlas of the Middle and South Atlantic States. Bamberger Beiträge zur Englischen Sprachwissenschaft 19. New York: Peter Lang.

Durian, David, Robin Dodsworth, and Jennifer Schumacher. 2009. Convergence in urban blue collar Columbus AAVE and EAE vowel systems. *Publication of the American Dialect Society* 94:161–190.

Fasold, Ralph W. 1972. *Tense Marking in Black English. A Linguistic and Social Analysis*. Arlington, VA: Center for Applied Linguistics.

Fought, Carmen. 2013. Ethnicity. In *The Handbook of Language Variation and Change*, 2nd edition, ed. by J.K. Chambers and Natalie Schilling. Malden, MA: John Wiley and Sons.

Fridland, Valerie. 2003. Network strength and the realization of the Southern Vowel Shift among African-Americans in Memphis, TN. *American Speech* 78:3–30.

Grieser, Jessica. 2014. The Language of Professional Blackness: African American English at the intersection of race, place and class in Southeast Washington, DC. Doctoral dissertation, Georgetown University.

Kendall, Tyler, and Charlie Farrington. 2017. The Corpus of Regional African American Language. Version # 0.5. BETA. Eugene, OR: The Online Resources for African American Language Project.

Kendall, Tyler, Ralph Fasold, Charlie Farrington, Jason McLarty, Shelby Arnson, and Brooke Josler. 2017. *The Corpus of Regional African American Language: Washington DC 1968.* Version # 0.9. BETA. Eugene, OR: The Online Resources for African American Language Project.

Kendall, Tyler, Minnie Quartey, Charlie Farrington, Jason McLarty, Shelby Arnson, and Brooke Josler. 2017. *The Corpus of Regional African American Language: Washington DC 2016.* Version # 0.5. BETA. Eugene, OR: The Online Resources for African American Language Project.

Kendall, Tyler, and Thomas, Erik R. 2010. Vowels: Vowel manipulation, normalization, and plotting in R. R package, version 1.

Kendall, Tyler, and Walt Wolfram. 2009. Local and external language standards in African American English. *Journal of English Linguistics* 37:305–330.

King, Sharese. 2016. On Negotiating Racial and Regional Identities: Vocalic Variation Among African Americans in Bakersfield, California. *University of Pennsylvania Working Papers in Linguistics: Selected Papers from NWAV 44*, ed. by H. Jeoung.

Kohn, Mary. 2014. The Way I Communicate Changes but How I Speak Don't: A Longitudinal Perspective on Adolescent Language Variation and Change. *Publication of the American Dialect Society* 99, ed. by Robert Bayley.

Koops, Christian, and Nancy Niedzielski. 2009. /t,d/- glottalization and vowel variation in Houston AAE. Paper presented at New Ways of Analyzing Variation 38: Ottawa, ON.

Lee, Sinae. 2016. Phonetic variation in Washington DC: Race, neighborhood and gender. Doctoral dissertation, Georgetown University.

Lobanov, Boris M. 1971. Classification of Russian vowels spoken by different speakers. *The Journal of the Acoustical Society of America*, *49*:606–608.

Loman, Bengt. 1967. *Conversations in a Negro American Dialect*. Washington, DC: Center for Applied Linguistics.

Luelsdorff, Philip. 1975. *A segmental phonology of Black English* (Vol. 191). Mouton.

Nguyen, Jennifer. 2006. The changing social and linguistic orientation of the African American middle class. Doctoral dissertation, University of Michigan.

Nylund, Anastasia. 2013. Phonological variation at the intersection of ethnoracial identity, place, and style in Washington DC. Doctoral dissertation, Georgetown University.

Podesva, Robert J. 2011. Quantifying and interpreting the pin-pen merger in Washington, DC. Colloquium presented at the University of Texas at Austin, Austin.

Price, Daniel O. 1969. *Changing Characteristics of the Negro Population*. U.S. Census Monograph. Washington, DC: Government Printing Office.

Purnell, Thomas. 2009. The vowel phonology of urban southeastern Wisconsin. *Publication of the American Dialect Society* 94:191–218.

Putnam, George N., and Edna M. O'Hern. 1955. The status significance of an isolated urban dialect. *Language* 31.4:v–32.

Schnitzer, Marc L. 1972. The Baltimore /o/ and generative phonology. *General Linguistics* 12:86–93.

Thomas, Erik R. 2001. An Acoustic Analysis of Vowel Variation in New World English. *Publication of the American Dialect Society* 85. Durham, NC: Duke University Press.

Thomas, Erik R. 2007. Phonological and phonetic characteristics of African American Vernacular English. *Language and Linguistics Compass* 1:450–475.

Thomas, Erik R. 2011. *Sociophonetics: An Introduction*. Basingstoke, UK: Palgrave Macmillan.

Thomas, Erik R., and Guy Bailey. 2015. Segmental Phonology of African American English. In *The Oxford Handbook of African American Language*, ed. by Sonja. Lanehart, 403–419. New York: Oxford.

U.S. Census Bureau. 2010. Retrieved June 19, 2016, from http://www.census.gov/.

Weaver, Rebecca Ann. 2000. Acoustic features of /r/ variations in African American vernacular English-speaking children and adults of the Midsouth. Doctoral dissertation, Memphis State University.

Wolfram, Walter A. 1969. *A Sociolinguistic Description of Detroit Negro Speech*. Washington, DC: Center for Applied Linguistics.

Wolfram, Walt. 2007. Sociolinguistic folklore in the study of African American English. *Language and Linguistics Compass* 1:292–313.

Wolfram, Walt, and Mary Kohn. 2015. Regionality in the Development of African American English. In *The Oxford Handbook of African American Language*, ed. by Sonja Lanehart, 140-159. New York: Oxford.

Wolfram, Walt, and Erik R. Thomas. 2002. *The Development of African American English*. Malden, MA: Blackwell.

Yaeger-Dror, Malcah, and Erik Thomas, eds. 2009. African American English speakers and their participation in local sound changes: A comparative study. *Publication of the American Dialect Society* 94.

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